Reviewer's report

Title: No evidence of enhanced oxidant production in blood obtained from patients with obstructive sleep apnea

Version: 1 Date: 18 May 2008

Reviewer number: 1

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This paper looks at markers of oxidative stress in patients with OSA, pre and post treatment, and some semi matched controls. There are no placebo treated controls but as the results are negative this is reasonable as a pilot study. It is an important negative study as there are poor studies in the literature claiming effects which are severely flawed in their design.

The main problem with the paper is that it is written very unconventionally. There is considerable confusion over introduction and methods, with much of the methods appearing in the introduction. There is inconsistent reporting of results with mixtures of tables and text. It would be best to use tables with so many numbers to report. In addition the outcome data on the severe OSA patients would be better reported in another column of the main results table to aid comparison, as per the baseline data in table 1.

There is no attempt to offer a power calculation or more appropriately a confidence interval analysis to demonstrate what size of difference after CPAP you might have missed due to a type II error.

The paper is too long, with extensive discussion of matching issues in other studies.

Table 4 should all be in the same font. I do not see the point of reporting both mean and median, and I do not understand how the IQR can be one number. Choose either parametric or non-parametric, as appropriate and stick to it. I would advise non-parametric.

I would advise that this be rewritten by a native english speaker and that conventional placement of information into the right sections is adhered to.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.